United Nations E/CN.3/2011/10

Economic and Social Council

Distr.: General
14 December 2010

Original: English

Statistical Commission
Forty-second session
22-25 February 2011
Item 3 (f) of the provisional agenda*
Items for discussion and decision: integrated economic statistics

Report of the Friends of the Chair on integrated economic statistics

Note by the Secretary-General

In accordance with a request of the Statistical Commission at its forty-first session (see E/2010/24, chap.I.A), the Secretary-General has the honour to transmit the report of the Friends of the Chair on integrated economic statistics. The report provides information on progress in the development of the draft guidelines on integrated economic statistics prepared at the request of the Commission at its thirty-ninth session. The draft guidelines are available as a separate background document. The Commission is requested to express its views on the draft guidelines and to provide advice on their finalization. Points for discussion are included in section IV of the report.

* E/CN.3/2011/1.

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Report of the Friends of the Chair on integrated economic statistics

I. Background

1. The idea of developing and achieving an integrated system of international statistics has a long history among national and international governing bodies of economic statistics. The motivating source of this work has been the benefits of integrated economic statistics for nationally and internationally coordinated economic policy in the interconnected global economy.

2. The Friends of the Chair on integrated economic statistics was first initiated at the thirty-seventh session of the Statistical Commission in 2006. The Commission endorsed the concept of an integrated approach to economic statistics and recommended its operational use in national economic programmes. It also recommended the establishment of a Friends of the Chair group to prepare a concept paper on the modalities of the integrated approach to economic statistics, including the feasibility of establishing a mechanism to improve coordination among international organizations and work groups engaged in economic statistics (see E/CN.3/2006/32).

3. At the thirty-ninth session of the Statistical Commission, the group presented its final report (see E/CN.3/2008/6) with the following conclusions:

(a) The integration of economic statistics is about statistical reconciliation; that is, ensuring that the messages that statistics deliver are consistent and coherent. Reconciliation covers primary economic statistics and macroeconomic accounts, short and long-term economic statistics, and national and international economic statistics. In essence, it involves dealing with conceptual, statistical production and institutional issues. Human resources issues (increasing the awareness of statistical agencies' staff concerning the impact of their work on the overall statistical system) and information technology issues (adopting common technology) also play a role and must be considered in that context;

(b) The integration of economic statistics is mainly driven by users' demand for data consistency and coherence;

(c) It is neither possible nor desirable to propagate one single and detailed implementing approach towards integrated economic statistics because national statistical systems are different. There are, however, some general guiding principles;

(d) Institutional arrangements at both the national and international levels are important for the management of integrated economic statistics and should be part of the corresponding reform programmes.

4. As reflected in the final report of the thirty-ninth session (E/2008/24), the Commission supported the conclusions of the Friends of the Chair (see E/CN.3/2008/6), in its decision 39/105, in which it:

(a) Affirmed the role of the System of National Accounts as the integrating framework in economic statistics, and recognized the importance of increasing the coherence of basic economic statistics for enhancing the quality and analytical value of both basic economic statistics and macroeconomic statistics;

(b) Agreed with the need to collect and disseminate case studies and develop other practical knowledge material to share experiences and guide countries in the process of implementing an integrated approach in their national statistical systems;

(c) Also agreed that there might be a need to develop a framework for establishing such guidelines, and recommended that such guidance of integration should focus, in particular, on practical aspects.

II. Work to date on the draft guidelines on integrated economic statistics

5. In addressing recommendations made in the report to the Statistical Commission (E/CN.3/2008/6), a second iteration of the Friends of the Chair group was formed in 2009 to take the lead in developing more extensive and practical guidelines along the lines recommended by the first group. The group is chaired by Steve Landefeld of the United States Bureau of Economic Analysis and its composition includes members from national and international organizations, currently comprising Statistics Canada, the National Institute of Statistics and Geography of Mexico (INEGI), Statistics Netherlands, Statistics New Zealand, Statistics South Africa, the International Monetary Fund, the European Central Bank, the Statistical Office of the European Communities (Eurostat), the Organization for Economic Cooperation and Development (OECD), the Statistical Division of the Economic Commission for Europe and the United Nations Statistical Division.

6. In December 2009, the second Friends of the Chair on integrated economic statistics group met in Washington, D.C., to formally discuss the draft chapters submitted by members for group review. Lead authors in attendance at the meeting presented their draft chapters to the members of the group for discussion of consistency with the initial report and recommendations and further changes and clarification of outstanding issues. Additional drafts and comments contributed by Friends of the Chair members as a result of that meeting were incorporated into subsequent versions of the guidelines. Richard Walton of the European Central Bank, a member of the Friends of the Chair group, contributed as editor of the guidelines.

7. The draft now before the Statistical Commission is a full working draft of the guidelines on integrated economic statistics. It has been compiled and was released for global comments on 2 December 2010. The comments received in the consultation are summarized in a background document to be submitted to the Commission. The results of the global consultation, as well as further comments from the Statistical Commission and the Friends of the Chair group members, will be reflected in the final version of the guidelines. The executive summary of the guidelines is contained in the annex to the present report.

8. In addition, in November 2010, at the invitation of the Chair of the Conference of European statisticians, the Friends of the Chair on integrated economic statistics prepared a report on its activities and forthcoming guidelines. The report was a contribution to the in-depth review by the Bureau of the Conference of European Statisticians on issues relating to the use of secondary and mixed sources for official

statistics; it highlighted how various issues in the use of secondary and mixed data are addressed in the context of the guidelines for integrating economic statistics.

III. Overview of draft guidelines on integrated economic statistics

9. The draft guidelines have built carefully on the findings and conclusions of the first Friends of the Chair group. The starting point of the guidelines is the internationally accepted standards, including the System of National Accounts 2008, the Balance of Payments Manual, Sixth Edition (BPM 6), and other specialized guidelines ranging from the measurement of prices to the measurement of foreign direct investment.

10. The draft guidelines build on international standards manuals and their emphasis on policy-relevant data by describing principles and detailed practices for further increasing the consistency and coherence of economic data within countries, over time, and across countries. These principles relate to issues such as the central role of customers in designing strategic plans for integration and the reliance on international standards and economic theory as the organizing principles for integration of microdata and macrodata.

11. Special emphasis is put on the importance of user needs in achieving consistency and coherence. Both text and case study examples are used to help illustrate the importance of user needs in achieving integration. Understanding user needs will be important in helping countries target their scarce resources to those harmonization efforts with the largest returns from the perspective of users.

12. The draft guidelines focus on consistency and coherence in the full chain of economic statistics, from short-term indicators to national and international macroeconomic statistics that are based on these indicators.

13. The full set of relevant conceptual, production and institutional issues are addressed. These issues range from the use of consistent definitions, questionnaires, classifications and sample frames to the use of consistent concepts and balancing techniques in national accounts.

14. Processes that play an integral role in the statistical production process such as strategic planning, human resource management, information technology employment, data dissemination and communication are also utilized in formulating integration strategies and current existing examples are highlighted in the use of case studies.

15. The draft guidelines present general guiding principles, as well as practical advice for the reconciliation of economic statistics for the entire spectrum of statistical agencies, from those that could be described as highly centralized and able to control the entire production process to those that are decentralized and must try and harmonize a wide array of data collected by different agencies using differing collection methods.

16. The recommended practices vary across countries. Countries with centralized systems may be better positioned to achieve consistency through bottom-up practices, such as the development of common business, common definitions, and common surveys to assure consistency in the microdata used as inputs into national

accounts and other macrodata. Countries with a more decentralized system also need to work with various primary and secondary data suppliers to improve consistency, but they are likely to be better positioned to achieve consistency through "top-down" adjustment procedures to adjust input data to national accounts definitions and concepts, the use of common source data and methods, and the use of consistent balancing techniques.

17. While comprehensive and consistent source data are essential to developing accurate and reliable economic statistics, in practice the source data used will never meet all of these criteria. Source data may be generated directly to support the production of national economic accounts; however, much of the overall body of source data will likely be generated for other purposes such as tax collections, customs and border control, and financial regulation. The draft guidelines address ways in which the latter type of source data might be harmonized and further adjusted to support a fully integrated system of accounts.

IV. Points for discussion

18. **The Commission is requested to:**

(a) **Express its views on the draft guidelines and comment on the practical aspects and national experiences of integration provided as guidance to countries in the implementation of an integrated approach to economic statistics;**

(b) **Provide advice on priorities and main improvements needed for the finalization of the guidelines on the basis of the comments received in the global consultation.**

Annex

Guidelines on integrated economic statistics: executive summary

Chapter 1

Integrated economic statistics are comprehensive sets of statistics that use common concepts, definitions, estimation methods, and data sources to produce a consistent and harmonized picture of economic activity for policy, business, investor, household and other users of economic data.

1. In the last two decades, the international statistical system has made great progress in harmonizing economic statistics through internationally accepted guidelines, including the System of National Accounts 2008, the Balance of Payments Manual, Sixth Edition (BPM 6), and more specialized guidelines ranging from the measurement of prices to the measurement of foreign direct investment. The motivating source of this work has been the need for and the huge benefits of integrated economic statistics for internationally coordinated economic policy requirements in the interconnected global economy.

2. This volume builds on these guidelines and their emphasis on policy-relevant data by describing principles and detailed practices for integrated economic statistics. These principles relate to the consistency and coherence of economic data within countries, over time, and across countries and include the design of strategic plans for integration and the reliance on international guidelines and economic theory as the organizing principles for integration of micro and macro data.

3. The recommended practices vary across countries. Countries with centralized systems may be better positioned to achieve consistency through "bottom-up" practices such as the development of common business, common definitions, and common surveys to assure consistency in the microdata used as inputs into national accounts and other macrodata. Countries with more decentralized systems also need to work with data suppliers to improve consistency, but are likely to be better positioned to achieve consistency through "top-down" adjustment procedures to adjust input data to national accounts definitions and concepts, the use of common source data and methods, and the use of consistent balancing techniques.

4. **Chapter 2** discusses the benefits and principles of integrated economic statistics and the strategic planning processing for achieving integration. The chapter concludes with case studies on the benefits from integration from the United States and the Euro Area Accounts.

5. Macroeconomic accounts, as exemplified by national and balance of payments accounts, along with associated macro price and employment data, are the cornerstones of economic policy, business strategy, and investor and household expectations. These data are used by governments around the world to guide monetary and fiscal policy, develop tax, spending and budget plans, allocate taxes and grants and aid, develop tax incentives, direct trade and investment policies, and monitor and regulate financial markets and contribute to a wide range of other government policies. The macroeconomic data are also used by businesses and households, along with information about their own businesses, investments, and

personal finances, to develop the plans and expectations that form the basis for economic decisions.

6. To be useful to these users, macroeconomic data needs to be consistent with the constant stream of other economic indicators that comes to these users on a regular basis, including retail sales, construction spending, profits, employment, wages and salaries, and inflation. These statistics are important in their own right, and are used for many policy and business decisions, as well as inputs for macro statistics. Comprehensive integration begins with the organizing framework of the national accounts. Moreover, integration must also encompass harmonizing the economic indicators that form the foundation for the national accounts. Macroeconomic statistics also need to be integrated, coherent and consistent. National accounts were borne out of the Great Depression and developed as a consistent and comprehensive measure of economic activity for policymakers. The need for a consistent and integrated framework for users remains of great importance. The recent financial crisis is an important reminder of the need for integration, and in particular between the real and financial accounts.

7. These user needs for integrated and consistent economic data should remain the foundation for countries' plans for developing better integrated and relevant economic accounts and associated economic data. The central role of these users also underlines the importance of ensuring that better integrated accounts should be designed to be consistent with macroeconomic concepts and models, including macroeconomic growth, productivity, and forecasting models used by governments, business, investors and researchers.

8. The benefits of such integration not only accrue to users of the data. For countries able to redesign collection systems from the "bottom up", the use of common questionnaires, business lists, and definitions improve consistency and reduces respondent burden and statistical agency costs, allowing agencies to better direct their scarce resources to answering users' demands for updating and extending the accounts. Such integration in data collection also facilitates the introduction of consistent, automated edits and other best practices that reduce the likelihood of errors and improve accuracy, while at the same time increasing consistency. For countries more reliant on top-down procedures, the ability to share microdata and reconcile major differences in business lists, and the use of common concepts, definitions, classifications, source data, seasonal adjustments, balancing techniques, extrapolation and other methods can produce large gains in consistency, accuracy and efficiency.

9. The chapter emphasizes the importance of an integrated statistical system based on economic theory and points to the System of National Accounts (SNA) as a central tool for ensuring that economic statistics are conceptually consistent with economic theory. SNA also serves as a coordinating framework for economic statistics in at least two other ways. First, it serves as a conceptual framework for assuring the consistency of the definitions and classifications used in different, but related, fields of statistics. Second, it serves as an accounting framework for ensuring the numerical consistency of data drawn from different sources, such as business indicators, household surveys, merchandise trade, tax and other administrative data. The SNA's double-entry comprehensive framework is a powerful tool for integration, identifying gaps, harmonizing concepts and setting priorities. A former Under-Secretary of the United States Commerce Department

used to describe the national accounts as the "mine shaft canary of the decentralized U.S. statistical system", which can serve an important role in ensuring consistency and integration in both centralized and decentralized systems.

10. The guidelines on principles and practices from chapter 2 are the following:

- The integration of economic statistics should be mainly driven by users' needs for relevant, timely, consistent and coherent data;
- An integrated system of economic statistics should have a sound foundation in economic theory;
- National accounts, as exemplified by the harmonized System of National Accounts and the Balance of Payments manuals, should be the central organizing framework for integrated accounts, in ensuring consistency with economic theory, consistency in definitions and classifications and in identifying gaps and inconsistencies and setting priorities;
- User needs for the economic indicators that feed into macroeconomic statistics must also be taken into account;
- Integration should be consistent with the conceptual and theoretical models employed by users: macroeconomic forecasting, Total Factor Productivity, and EU KLEMS (EU level analysis of capital (K), labour (L), energy (E), materials (M) and service (S) inputs) models; and
- Outreach to users is essential in identifying the largest benefits to users and developing a strategic plan for integration.

11. The trade-offs between accuracy, timeliness, consistency, coherence, credibility and relevance have to be considered. Users should also be informed of the trade-offs between developing new macrodata series and opportunities for improving the consistency and level of detail in the existing data through common sample frames, definitions, data sharing, and other tools, and users need to be consulted about the scope of integration beyond macroeconomic statistics.

12. **Chapter 3** discusses the general guiding principles and building blocks of integrated economic statistics, ranging from integrated data collection systems and the use of harmonized international guidelines to the use of common source data, classifications, seasonal adjustment and other estimation methods, and cross-system coordination. The chapter goes on to discuss the role of national and balance of payments accounts in defining the scope of integration and provides references to United Nations and Economic Commission for Europe classification systems. The discussion also encompasses various strategies for achieving integration, including centralized data collections systems — with common business registers, questionnaires and classifications — and the use of common source data, balancing techniques, seasonal adjustment, extrapolation and other methods. The usefulness of these integration tools within centralized and decentralized systems is discussed. The chapter includes good practices in integrating economic statistics in case studies: including agriculture in the national statistical system, integrating monetary and financial statistics in the euro area financial accounts and the SNA 2008 update project.

13. Chapter 3 guidelines include:

- Countries should place a high priority on the goal of harmonized data collections. For highly centralized systems this may mean common business registers and common surveys. For more decentralized systems this may mean sharing microdata to resolve major inconsistencies across business registers, the use of consistent classification systems and common questions; and
- Countries should also place a high priority on the coordinated use of common source data, definitions, and methods across statistical units to achieve greater consistency and integration for users. Inconsistencies are often driven by historical decisions on source data and methods that are unrelated to accuracy in today's economy or current user needs. In these instances, large gains can be made in consistency through agreement on common definitions, seasonal adjustments, source data, extrapolation and other techniques.

14. **Chapter 4** discusses strategic issues for integrating economic statistics and provides references to more detailed materials, including those from the United Nations, the European Union, the Netherlands, New Zealand and the United Kingdom. The chapter emphasizes the need for the development of a set of principles and protocols for integrating statistics which specify the scope of integration and the means for achieving that integration. The adoption of a set of common principles on integration by statistical agencies in a decentralized system and by the functional departments in centralized systems is a key step in achieving integration. Successful implementation is more likely where there is support at the highest levels within and across statistical agencies and by user agencies.

15. The chapter provides a practical step-by-step guide for developing a strategic plan for integrating statistics. Special attention is paid to management culture and the need for flexibility in developing integration plans across different types of statistical systems. Useful tips are given regarding advisory committees, memorandums of understanding between users and producers, providing incentives for integration to producers of existing statistics, and initiating projects to demonstrate the feasibility and benefits of integration.

16. Chapter 4 guidelines include:

- Statistical agencies should work with users to develop a set of principles and protocols for integration;
- Enlisting high-level support by users and within the statistical system is critical to successful integration. Such support is important in obtaining resources, in developing priorities, and in providing incentives to individual statistical units for integration with other units;
- Integration goals and plans need to be integrated with existing strategic plans and balanced against other competing demands for resources, including quality standards, updating the statistics, and improving timeliness and relevance;
- Coordinating mechanisms should be evaluated and revised to reflect integration goals. Most countries do not have highly centralized statistical offices, although they do have mechanisms for coordination. Even countries with highly centralized systems should evaluate and revise their coordination mechanisms as appropriate to reflect integration goals and plans; and

- Incentives should be developed to help "sell" integration; monetary authorities, finance ministries and other key users can play an important role in this process.

17. **Chapter 5** presents the specific tools that countries can use for increasing consistency at each stage in the statistical production process of integrated economic statistics. The discussion and the New Zealand, Canada and Netherlands case studies in this chapter focus on the full range of management tools that can be used to achieve integration in centralized and decentralized systems. The guidelines for this chapter are more numerous and less generic, but the broader principles are as follows:

- Integration should address all stages of the production process from design of the collection system to the compilation and dissemination of data;
- Countries should, however, focus their efforts on those aspects of the process over which they have the most control and which will produce the biggest bang for the buck. Defining this focus will require balancing costs and benefits and will vary across statistical systems, centralized and decentralized; and
- Integration and change in statistical systems requires strong support and clearly defined leadership.

18. This chapter also describes the characteristics and requirements for integration in data collection and processing systems. This detailed chapter discusses understanding the impact of user needs on integrated data collections, the design of integrated data collections, the importance of common terminology and units of measurement, the definition of business units, the essential role of comprehensive and up-to-date business register, the design of questionnaires, integrating administrative with survey data, and tools for data processing and storage than increase integration and consistency.

19. Chapter 5 guidelines include:

National Statistical Offices should focus on four elements in developing their infrastructure and processing environment: consistency, coherence, breadth and depth:

- Consistency requires the use of common concepts, terminology, standards and defining statistical units uniformly;
- Coherence requires that interrelated data should be internally consistent;
- Integrated systems should provide sufficient overall coverage and level of detail to meet user needs for breadth and depth;
- A transparent process is required to evaluate the needs of users and to prioritize them in the statistical system. Priority settings should translate into a medium-term plan. This will assess the capacity to capture new information and to maintain the current statistical system. This will go a long way to explain the direction of the statistical system;
- A strong governance structure is fundamental to the design of an integrated statistical collection system. Adopting measures that will minimize conceptual, classification and statistical issues require a significant amount of coordination;

- National statistical offices should develop a common and comprehensive business register and a means of reconciling multiple business registers, to ensure that all entities can be identified and can be measured in an unduplicated way;

- The application of consistent classifications to appropriately defined statistical units is essential for the coherence of economic statistics;

- Integrated systems require the use of common concepts, definitions and classifications. This will ensure consistency in the content of questionnaires and of the statistics of all programmes of the statistical system;

- The use of administrative data should complement survey-taking activities. Relying exclusively on surveys to increase breadth and depth of the statistical system is costly and imposes a large burden on respondents;

- Clear arrangements should be put in place between the statistical office and administrative authorities, to ensure that statistical needs are considered in designing or changing administrative information collections in a coherent manner within the statistical system;

- Metadata are an important prerequisite in developing an integrated questionnaire/statistical system. The metadata will provide the necessary coherence between the various estimates and tools leading to the production of the statistical information. Metadata should cover concepts, variables and classifications, as well as quality;

- National Statistical Offices should put a high priority on developing a system relying on standardized statistical processes with the goal of making optimum use of statistical methodologies and information technology. The goal should be to develop generic tools to process the data and standard approaches to resolve issues at various stages of the production process, recognizing that it could take several years before the system reach a mature stage; and

- A flexible IT infrastructure is critical to adapting to changes in the economy, concepts, methods and information technology. This will help optimize operational integration, data coherence and consistency, as well as analytical capacity and knowledge retention.

20. **Chapter 6** describes how good practices and examples on communication demonstrate the practical utility and relevance of enhancing the story the statistics contain for a broad range of users that meets their analytical needs and enables conclusions to be drawn about the quality of the disseminated data. The production of integrated economic statistics is complemented with strong statistical dissemination practices. The IMF's data dissemination initiatives have provided some structure to enhance user capacity to evaluate the comparability of data across datasets within a single country and across countries. Building a nexus to the Statistical Data and Metadata Exchange (SDMX) initiative and providing capacity-building in countries to implement good dissemination practices should be an important part of a future agenda to make integrated economic statistics a reality. The central theme in constructing such an agenda is to keep the focus on users' needs, especially those users involved in economic analysis and policy work.

21. Chapter 6 guidelines include:

- An analytical quality framework will provide good dissemination practices for integrated economic statistics;
- Efficient access to and presentation of data and metadata;
- The use of SDMX to promote the sharing of statistical information; and
- Data warehouses can play an effective role in the integration of economic statistics.

22. **Chapter 7** introduces practical issues related to the compilation of an integrated set of accounts. It begins with national accounts and then discusses more focused accounts such as international accounts, industry accounts, sector accounts and financial accounts. Regional statistics — relevant for those countries that have well-defined sub-aggregates — are discussed. Finally, other accounts, including satellite accounts — which may be linked to the core accounts but incorporate alternative definitions and conventions — are also introduced. The discussion focuses on practical compilation problems that might arise during implementation and on potential solutions for both centralized and decentralized systems. Examples from the economic accounts of the Netherlands and the United States are provided.

23. Chapter 7 guidelines include:

- Integration is a desirable goal because it allows for comparisons within the various accounts and across accounts;
- In practice, source data is unlikely to satisfy all purposes and will need to be adjusted and harmonized to support a system of integrated accounts, and considerations should be made for the frequency and timeliness of source data;
- Input-output or supply and use tables may be used as the integration framework for economic statistics; input-output accounting may be used to benchmark the core national accounts;
- Industry accounts should be used to provide information about production and the goods and services produced; consistent industry and product classification systems are important;
- International accounts are an important part of any country's economic accounting with the rest of the world. International accounts should be harmonized with the domestic accounts — for both goods and services and financial flows and positions — and, to the extent possible, with the accounts of other countries. Bilateral comparisons, including those conducted under the auspices of IMF and OECD can be useful in this regard;
- Regional accounts may be used to provide a detailed view of geographically related portions of the economy. Related economic activity should be localized in an area that is appropriate, given the relative ease of labour and capital mobility; and
- Linkages between the core accounts and other accounts — such as labour accounts, monetary statistics and satellite accounts, that provide additional information on specific areas of interest or an alternative framework for analysing certain aspects of the economy — should be examined to encourage harmonization to the extent feasible.